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PEKIN LAKE STATE FISH AND WILDLIFE AREA
SOUTHERN UNIT

CRITICAL RESTORATION PROJECT
ILLINOIS RIVER ECOSYSTEM RESTORATION STUDY, ILLINOIS

ENVIRONMENTAL ASSESSMENT

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JULY 2004

PEKIN LAKE STATE FISH AND WILDLIFE AREA
SOUTHERN UNIT

CRITICAL RESTORATION PROJECT
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BACKGROUND

Pekin Lake State Fish and Wildlife Area (SFWA) is a complex of approximately 1,200 acres of lakes, wetlands, and bottomland hardwood forest, is located adjacent to the city of Pekin, Illinois (Plate EA-1). Pekin Lake SFWA consists of six former and current bodies of water separated by moist soil plant communities and bottomland timber. Sediment deposited over the years has filled the former lake basins, making most of these water areas dry or too shallow to sustain fish during normal dry season/low water period pool levels in the Illinois River. The lakes and their former sizes were:

Southern Unit
Soldwedel Lake, 105 acres (old Pekin Lake)
Lake of the Woods, 108 acres

Northern Unit
Worley Lake, 258 acres
Slim Lake, 57 acres
Round Lake, 16 acres
Little Round Pond, 4 acres

Channels, or culverts, through man-made levees and causeways connect all these lake basin areas, with the exception of Round Lake and Little Round Pond. The connecting channel to the Illinois River is located at the south end of Soldwedel Lake, near the Illinois Route 9 road bridge.

The Pekin Lake complex is one of the few remaining public hunting and fishing areas, in the Illinois River Valley, that is located near a major metropolitan area. In the latter part of the 19th century, the W.A. Boley Ice Company erected a wood-piling dam at the south inlet to "Pekin Lake" to hold water within the lake. During the winter months, they cut ice from the lake to be sold. The dam in conjunction with a large number of natural springs located on the east side of the lake assured a continuous supply of clean water for the ice operation.

After the Boley Ice Company went out of business, the Pekin Rod and Gun Club purchased the northern portion and stopped public hunting and fishing. Restrictions imposed by the gun club were not liked by many of the local residents and they destroyed the dam around 1938 in a show of protest against the gun club's restrictions. Also in 1938 the Peoria Lock and Dam was completed, replacing the lock and dam at Copperas Creek.

This resulted in a significant change to the hydrology of the lake complex. To counteract the drain of the lake during low water events on the river, private hunting and fishing clubs constructed a long chevron shaped dike across the lake for water control. This conservation dike has now deteriorated to the point that it is currently of no use for retaining water in the upper reaches of the complex.

In 1965, the Central Illinois Light Company (CILCO) purchased a 400-foot easement from the Pekin Rod and Gun Club to build a causeway approximately 600 feet north of the conservation dike. This causeway provides access and footings for CILCO electric transmission towers and overhead lines. There are several culverts through the causeway, and the causeway does not function efficiently to retain water.

In 1966, the Forest Park Foundation purchased the "Pekin Lake" property and sold it to the State of Illinois. The land was purchased for open space, as a wildlife sanctuary, and to preserve the heron rookery. The State has since purchased other small tracts, which now comprise the entire Pekin Lake SFWA. Current management of Pekin Lake SFWA by the Illinois Department of Natural Resources (IDNR) is passive.

Many factors have influenced the decline of the wildlife area over time. Silt build up in the backwater lakes has reduced their capacity. The change in hydrology resulting from the new operation of the Peoria Lock and Dam at RM 157.6 just above the wildlife area has resulted in greater water level fluctuations within the wildlife area as well as generally lower water levels overall. Lick Creek has been channelized so that it deposits directly into the Illinois River instead of being a major contributor of water to the wildlife complex. Increased development within the City of Pekin and the general area has resulted in an increase of water supply wells being dug so that much of the spring water that formerly fed the lakes in the complex has been diverted to business and residential use. While rainwater runoff still contributes to the area, it is not nearly enough to compensate for the other lost water sources during low water events on the river. For these reasons, simply restoring the old ice company dam would not be effective.

I. AUTHORITY AND PURPOSE

The Illinois River is one of three large floodplain-rivers that the National Research Council considers a priority for aquatic ecosystem restoration with sufficient ecological integrity to recover. The Illinois River Valley also has international significance as a part of the Mississippi Flyway, a major migration route for hundreds of thousands of waterfowl, shorebirds, and neotropical migrants.

The Illinois River Ecosystem Restoration Feasibility Study is being conducted under the authority of Section 519 of the Water Resource Development Act of 2000 in partnership with the State of Illinois Department of Natural Resources initiated in 2000. The study will identify the Federal and State interest in addressing problems within the entire Illinois River Watershed. System problems and a draft set of goals and objectives have been developed through numerous meetings with agency representatives, local sponsors, and

other stakeholders. The principal habitat problems in the Illinois River Basin are the result of sedimentation of backwaters and side channels, degradation of tributary streams, water level fluctuations, loss of floodplain and tributary connectivity, and other adverse impacts caused by human activities. A number of evaluations to develop detailed project plans for specific sites are underway. The IDNR and Corps have initiated assessments for six site-specific projects within the basin, one of which is Pekin Lake SFWA.

Funds for this project were provided in the Energy and Water Development Appropriations Act of 2002 to complete an initial assessment of the Illinois River Basin. This was in accordance with authority granted in Section 519 of Water Resources Development Act 2000 to complete a comprehensive plan and identify, evaluate, and implement critical restoration projects in the Basin.

The types of deepwater off-channel habitat included in Pekin Lake SFWA restoration alternatives are those types that are limited on the entire Illinois River. The *Habitat Needs Assessment* completed as part of the Upper Mississippi River System – Environmental Management Program in 2000 found that the most critical need along the Illinois River was the restoration of backwater lakes and side channels to increase depth diversity. This report called for the restoration of backwaters on the Illinois River so that 25% of the backwater lakes (19,000 acres) would have an average depth of at least 6 feet.

Concurrent to the development and initiation of the Ecosystem Study, the IDNR initiated development of a *Pekin Lake State Fish and Wildlife Area Draft Preliminary Restoration Plan*. This document established site goals and management objectives to be obtained through restoration at the site. The management objectives for the site are:

Major Objective: To maintain and enhance the existing natural heritage and wildlife resource integrity of the site with emphasis on waterfowl management, protecting the heron rookery and other sensitive avian species, and maintaining the site's value as a fish nursery to the LaGrange Pool of the Illinois River.

Secondary Objective: To provide public recreational activities that are consistent with the major objective and that do not detract from the area's natural value, including consumptive fish and wildlife programs, picnicking, canoeing, small pleasure boating, hiking, and wildlife observation and to provide for scientific research and educational studies at the site.

The document also relates the site's long history of use and natural resources. This information provided the Corps and sponsor with clear justification, consistent with critical restoration authorizing language and eligibility criteria defined above, to select the site for further investigation.

II. PROJECT LOCATION AND DESCRIPTION

The Pekin Lake SFWA is located on the Illinois River just below the Peoria Lock and Dam on the left descending bank and adjacent to the City of Pekin, Illinois (Pekin Quadrangle: Sections 14, 22, 23, 26 and 27, Township 25 North, Range 5 West, Tazewell County, Illinois).

The proposed project evaluated several options for the restoration of Pekin Lake SFWA. The restoration of the Southern Unit project proposes dredging to provide emergent, shallow water wetland and deep-water backwater aquatic habitat connected to the Illinois River for fish and other aquatic species. The site for placement of the material was selected to lessen willow invasion within Pekin Lake SFWA and promote the production of mast trees on the site.

This alternative (Plate EA-2) involves a combination of mechanical and hydraulic dredging. The base plan is to mechanically and/or hydraulically dredge approximately 7 acres of 50-foot wide deep channels from 432 NGVD (National Geodetic Vertical Datum) to approximately 420 NGVD into Soldwedel Lake and Lake of the Woods from the Illinois River. Additional hydraulic dredging of deep holes to 420 NGVD, finger channels to 420 NGVD and shallow shelves to 424 and 428 NGVD would add approximately 39 acres of dredging for a total of roughly 46 acres. Approximately 13,000 CY (cubic yards) of dredged material would be placed on 1.6 acres at **Site E** to an elevation of roughly 443 NGVD (a 7-foot raise). Approximately 320,720 CY of dredged material would be placed on 30 acres at **Site B** to an elevation of roughly 448 NGVD (a 12-foot raise).

Five small islands are also proposed to be constructed in current open-water areas of the lower lakes. The largest island would be located in Soldwedel Lake and approximately 1 acre in size or 352 feet in diameter at the base (lake bottom, 432 NGVD). This large island would be constructed with mechanical and hydraulic dredging to an elevation of approximately 454 feet NGVD and have mast trees planted on it. The other four islands would be approximately 112 feet in diameter at the base. Two islands would be constructed using DRE (dry) dredge to fill geotubes to form a circle with the center areas filled hydraulically. As the Hydraulic material dewaters and settles the middle of the island would form a depression where a perched wetland would form. Construction of the other two islands would be done by mechanical dredging to stack material to form the islands. One type of each island would be constructed in Lake of the Woods and Soldwedel Lake. All islands would be monitored by the IDNR to observe how well they hold up over time under the various conditions of the two backwater lakes. This information may help determine which construction technique may be utilized to better effect for future ecosystem restoration projects.

Although not part of the Federal project, the City of Pekin may contract to have additional sediment hydraulically removed from the lower lakes and placed offsite on land adjacent to a nearby abandoned quarry (Plate EA-3 & EA-4). The quarry would be reached by placing dredge pipe across the wooded area northeast of Soldwedel Lake. The pipe would then

pass through a culvert under the railroad line, along a drainage ditch west and north of the cemetery office building, through another culvert under Highway 29, up over a short dead end road that parallels Highway 29 and onto the land adjacent to the quarry. This action by the City could potentially expand dredged areas in Soldwedel Lake by approximately 7.6 acres these dredged areas would not impact the federal project and will require future coordination with the City of Pekin, IDNR, and other interested parties. Material placed adjacent to the quarry would cover an area of approximately 17 acres. The City wishes to promote as much dredging in Pekin Lake SFWA as possible. They also desire to develop the land adjacent to the quarry but need fill for that area before it can be adequately developed.

III. ALTERNATIVES

The Southern Unit Project includes the area below the CILCO Causeway within Pekin Lake SFWA. Actions proposed for this area involved varying degrees of dredging within Soldwedel Lake and Lake of the Woods and placement sites for dredged material. When placement site options were evaluated, the desires of the City of Pekin and the IDNR for potential future development were also considered.

Dredging Options. Several dredging options were considered. Federal project costs are limited to $5 million per project under this project's authorization. When the additional money from the non-federal cost share sponsor (IDNR for this project) is figured in, the project cap is in the neighborhood of $7.6 million. This defines the spending limits of this project, thus, estimated total project costs cannot exceed that figure. The dredging options considered for the Southern Unit are as follows:

- **D1-**6.6 *Acres of Dredging: Connecting Channels (Base Option)* – 50' wide channel from the river into Soldwedel Lake (channel lengths **a-b, b-c** and **c-d**), and 50' wide channel from Soldwedel Lake into Lake of the Woods (channel lengths **c-e** and **e-f**) to EL. 424.0 +/- This option is included in all other dredging measures.
- **D2-**26.7 *Acres of Dredging:* – Dredging of *Base Option* (**D1**) with finger channels (channel length **g-h**) to EL. 424.0+/- and holes to EL. 420.0+/- in both Soldwedel Lake (area **4**) and Lake of the Woods (area **7**). Dredge shelved areas ranging from EL. 420.0+/- to 428.0+/- in Lake of the Woods (areas **6** and **5**).
- **D3-***45.7 Acres of Dredging:* – This measure includes **D2** plus dredging shelved areas ranging from EL. 420.0+/- to 428.0+/- in Soldwedel Lake (areas **3, 1** and **2**).
- **D4-***40.6 Acres of Dredging:* – This measure includes **D3** with approximately 5.0 acres less of dredging in areas adjacent to the entrance channel (area **1**) and at the northern ends of Soldwedel and Lake of the Woods and a dredged channel now connecting those two lakes.

Access Channel to Pekin Lake SFWA. Originally, three potential access points could be explored. However, after preliminary site visits it was realized that one option was preferred that required no additional lands outside of IDNR ownership and it provided the

most direct route at the lowest cost. Therefore, all dredge options include access from the Illinois River at this location.

Placement Options. Several placement options were considered for this project. The dredging and placement costs were considered together and limited by the per-project cost limitations explained earlier. In addition, consideration was given to the desires of the City of Pekin and the IDNR for potential future plans for the area. The City wished to promote recreational opportunities for the area and possibly do some additional dredging in Soldwedel Lake and/or Lake of the Woods. The IDNR wished to reintroduce a mast tree component to the wildlife complex, which (because of the changed hydrology of the area) requires higher land elevations than are currently found there. They also wished to develop islands in backwater areas along the Illinois River, and thought this would be a good opportunity to construct some small-scale trial islands using different techniques. These small islands would add additional diversity to the Pekin Lake SFWA.

Consideration was given to using the CILCO Causeway for placement of dredged material. The construction required to convert the CILCO Causeway into a proper levee would not contain all of the material proposed to be dredged from the Southern Unit. In addition, because of the proposal to do additional dredging in the upper lakes and potentially build the water control structure using that dredged material under another project, it was decided to limit the placement options to those described below for the Southern Unit Project.

- **P1** *Sidecast Material Along Dredged Channels* – Mechanically place material along the dredged channel for the dredging *Base Option*. This would place approximately 13,000 CY (cubic yards) of material on approximately 2 acres at **Site E** to an elevation of roughly 443 NGVD and approximately 72,245 CY of material on approximately 5 acres along the outer edges of **Site B** to an elevation of roughly 444 NGVD.
- **P4** *West Side of Lake of the Woods* – Hydraulically place approximately 197,500-218,000 CY of material in the riparian woods on the west side of Lake of the Woods at **Site A**. The material would cover approximately 12 acres and be placed to an elevation of roughly 443+, which would allow for the production of mast trees.
- **P7** *Between Soldwedel and Lake of the Woods* – Hydraulically fill an area of approximately 21 acres between the two lakes at **Site B** for a total of approximately 106,015 CY of material to an elevation of roughly 443+, which would allow for the production of mast trees.
- **P9** *Create Islands in Lower Lakes* – Mechanically or hydraulically dredge material and create islands (**C1, C2, C3, C4** and **C5**) to the side of finger channels and/or holes. Islands **C2** and **C4** would likely utilize dry dredging to fill geotubes to form island perimeters and then filled hydraulically. When the centers dewatered they would be lower, where it is believed they would form perched wetlands. Islands **C1** and **C5** would be constructed by mechanically stacking the dredged material to produce nesting/loafing islands. Island **C3** would be mechanically/hydraulically dredged material to produce a slightly larger island for mast trees.

Plates showing Alternatives S1 through S6 can be found in Appendix K of the main report.

S0 No Action Alternative. Over the 50-year life of the project, if nothing were done, we would see significant losses (approximately 43%) of the remaining shallow water area in the Southern Unit. Willows are present over other more desirable tree species in many of these areas because of low elevations and frequent flooding. As a result, moist soil/emergent cover would also decline, giving way to additional scrub-shrub and willow invasion producing marginal quality forested areas. This is not a consequence desired by the IDNR for the Pekin Lake SFWA

S1 Approximately 7 Acres of Dredging with Onsite Placement. This alternative involves dredging deep channels into Soldwedel Lake and Lake of the Woods from the Illinois River (*Base Option* **D1)**. Dredged material would be sidecast adjacent to the channels (placement option **P1)** with placement of 13,000 CY of material at **Site E**, 39,715 CY of material at **Site B** and 19,500 CY of material to create island **C3**.

While this alternative meets minimum project requirements (improved aquatic habitat), it is not preferred when larger restoration efforts are available.

S2 Approximately 27 Acres of Dredging with Placement for Mast Tree Production. This alternative involves dredging of the *Base Option* with additional dredging of fingers, shelves, and deep holes (dredging option **D2**). Dredged material would be sidecast adjacent to the channels (placement option **P1)** with additional placement of 13,000 CY of material at **Site E**, 106,015 CY of material at **Site B** and 197,500 CY of material at **Site A**. Material would also be placed to create islands **C1** (1,500 CY), **C2** (2,500 CY), **C3** (39,000 CY), **C4** (2,500 CY) and **C5** (1,500 CY) (placement options **P4**, **P7** and **P9**).

This alternative meets project requirements by producing aquatic habitat with some deep-water and emergent shelf areas within the lower lakes. It would also create temporary adverse impacts to the riparian forest at **Site A**; and while the area would ultimately benefit from the placement of the material with the potential for mast tree production, it would take several years to recoup the loss of the trees needing to be cleared for the placement activity.

S3 Approximately 27 Acres of Dredging with Placement for Wetland Restoration. This alternative involves dredging of the *Base Option* with additional dredging of fingers, shelves, and deep holes (dredging option **D2**). Dredged material would be sidecast adjacent to the channels (placement option **P1)** with additional placement of 13,000 CY of material at **Site E** and 200,515 CY of material at **Site B**. Material would also be placed to create islands **C1** (1,500 CY), **C2** (2,500 CY), **C3** (39,000 CY), **C4** (3,000 CY) and **C5** (1,000 CY) (placement options **P7** and **P9**).

This alternative meets project requirements by producing aquatic habitat with some deep-water and emergent shelf areas within the lower lakes and raising an area that is being taken over by willows. The raised area would still be frequently inundated, thus

maintaining wetland hydrology and characteristics (no net loss of wetlands) while allowing a more desirable bottomland hardwood component to develop. However, it is not preferred when larger restoration efforts are available.

S4 Approximately 46 Acres of Dredging with Placement for Mast Tree Production and Wetland Restoration. This alternative involves dredging of the *Base Option* with additional dredging of fingers, shelves, and deep holes in Lake of the Woods and Soldwedel Lake (dredging option **D3**). Dredged material would be sidecast adjacent to the channels (placement option **P1**) with additional placement of 13,000 CY of material at **Site E**, 276,026 CY of material at **Site B** and 218,000 CY of material at **Site A**. Material would also be placed to create islands **C1** (1,500 CY), **C2** (2,500 CY), **C3** (39,000 CY), **C4** (2,500 CY) and **C5** (1,500 CY) (Options **P4**, **P7** and **P9**).

This alternative meets project requirements by producing aquatic habitat with more areas of deep-water and emergent shelf areas within the lower lakes and raising an area that is being taken over by willows. The raised area would still be frequently inundated, thus maintaining wetland hydrology and characteristics (no net loss of wetlands) while allowing a more desirable bottomland hardwood component to develop on **Sites B** and **E**. Additionally, it would create temporary adverse impacts to the riparian forest at **Site A**; and while the area would ultimately benefit from the placement of the material with future mast tree production, it would take several years to recoup the loss of the trees needing to be cleared for the placement activity. This is not a preferred alternative when other restoration efforts are available.

S5 Approximately 46 Acres of Dredging with Placement for Mast Trees and Wetland Restoration. This alternative involves dredging of the *Base Option* with additional dredging of fingers, shelves, and deep holes in Lake of the Woods and Soldwedel Lake (dredging option **D3**). Dredged material would be sidecast adjacent to the channels (placement option **P1**) with additional placement of 13,000 CY of material at **Site E** and 320,720 CY of material at **Site B**. Material would also be placed to create islands **C1** (1,500 CY), **C2** (2,500 CY), **C3** (39,000 CY), **C4** (2,500 CY) and **C5** (1,500 CY) (placement options **P7** and **P9**).

This is the preferred alternative. This alternative meets project requirements by producing aquatic habitat with large areas of deep-water and emergent shelf areas within the lower lakes and raising an area that is being taken over by willows. The raised area would still be frequently inundated, thus maintaining wetland hydrology and characteristics (no net loss of wetlands) while allowing a more desirable bottomland hardwood component to develop over much of **Sites B** and **E**. Additionally, it would avoid the temporary adverse impacts to the riparian forest that placement at **Site A** would produce while still providing the potential benefits of higher elevations on **Site B** that would promote mast tree production. This alternative was selected because it maximizes benefits while meeting Corps and sponsor requirements and stays within authorized cost limits.

S6 Approximately 41 Acres of Dredging with Placement for Mast Tree Production and Wetland Restoration. This alternative involves dredging of the *Base Option* with

additional dredging of fingers, shelves, and deep holes in Lake of the Woods and Soldwedel Lake (dredging option **D4**). Dredged material would be sidecast adjacent to the channels (placement option **P1**) with additional placement of 13,000 CY of material at **Site E**, 256,115 CY of material at **Site B** and 191,000 CY of material at **Site A**. Material would also be placed to create islands **C1** (1,500 CY), **C2** (2,800 CY), **C3** (39,000 CY), **C4** (2,500 CY) and **C5** (1,500 CY) (Options **P4**, **P7** and **P9**).

This alternative meets project requirements by producing aquatic habitat with more areas of deep-water and emergent shelf areas within the lower lakes and raising an area that is being taken over by willows. The raised area would still be frequently inundated, thus maintaining wetland hydrology and characteristics (no net loss of wetlands) while allowing a more desirable bottomland hardwood component to develop on **Sites B** and **E**. Additionally, it would create temporary adverse impacts to the riparian forest at **Site A**; and while the area would ultimately benefit from the placement of the material with future mast tree production, it would take several years to recoup the loss of the trees needing to be cleared for the placement activity. This is not a preferred alternative when other restoration efforts are available.

Table EA-1 Summary of Dredging and Placement Considerations

VII. Feature	**Current Elevation***	**Proposed Elevation***	**Area in Acres****	**CY Dredged****
DREDGING:				
Channels	432	424	6.6-15.3	72,215-158,015
Area 1	432	428	0.2-3.0	1,500-20,000
Area 2	432	428	0.4-8.8	1,500-57,000
Area 3	432	424	5.8	75,000
Area 4	432	420	1.0-1.1	19,000
Area 5	432	428	7.5-8.7	56,000-81,300
Area 6	432	424	2.1-6.7	27,000-87,000
Area 7	432	420	1.1-2.4	22,000-46,000
PLACEMENT:				**CY Placed****
Site A	441	454	10.3-12.0	197,500-218,000
Site B	436	443.5	4.9-30.0	39,715-320,720
Site C1	432	446	0.25	1,500
Site C2	432	439.5	0.25	2,500-2,800
Site C3	432	450	0.7-2.8	19,500-57,400
Site C4	432	439.5	0.25	2,500-3,000
Site C5	432	446	0.25	1,000-1,500
Site E	436	443	1.6	13,000

*Approximate elevation in NGVD

** Where 2 numbers are shown, the smaller number corresponds to a lesser dredging option pictured on the project plates.

Infeasible Options Removed From Detailed Analysis: These options were dropped from further study because they were prohibitively costly and/or could not be reasonably justified.

Dredging Options: These options were eliminated because of dredging costs.

- **D5** *66.2 Acres of Dredging: Shallow Dredge 50% of Lower Lakes* – This measure includes **D2** plus dredging 50% of lower lakes to EL. 428.0' +/- with finger channels to EL. 424.0' +/- and holes to EL 420.0' +/-.
- **D6** *114.7 Acres of Dredging: Shallow Dredge 100% of Lower Lakes* – This measures includes **D2** plus dredging 100 % of the lower lakes to EL. 428.0' +/- with finger channels to EL. 424.0' +/- and holes to EL. 420.0' +/-.
- **D7** *66.2 Acres of Dredging: Deep Dredge 50% of Lower Lakes* – Dredge 50% of the lower lakes to EL. 424.0 +/-.

Placement Options: These options were eliminated for various reasons.

- **P3** *East Side of Soldwedel Lake* – Placement would occur adjacent to and parallel to the railroad embankment to serve as a buffer between the railroad, residential areas and the lake. There is potential for this area to be used for continued road access, parking, and boat ramps. Finally, placement at this location would increase shoreline length, diversity of transition habitat, and areas for mast tree production. This site was eliminated because of HTRW concerns.
- **P5** *Between CILCO Causeway and IDNR Levee* – Fill in an area between the two features to an elevation high enough to support mast tree production or stockpile material adjacent to one of the levee alignments. This site was eliminated because of adverse impacts to moist soil areas.
- **P6** *City of Pekin, Illinois Quarry Site* – Hydraulically pump material under railroad and IL Rt. 29 to an abandoned quarry site on the east side of Rt. 29. This site was eliminated because the limited placement area did not adequately support the dredge quantities the project would generate.
- **P8** *Removal Offsite* – Ship material by barge or rail to Chicago Superfund sites, Banner Marsh or Rice Lake. This was eliminated because of transportation costs.

Recreation Options. As the full range of measures and costs were developed, it was realized that recreation features would add costs in excess of the per project limit. Therefore, the sponsor decided not to pursue recreational features as part of this project in favor of more habitat restorations.

- **R1** *Public Access & Parking* – If dredge placement site P3 is included in the recommended plan, public access and parking facilities could be located here. The IDNR currently maintains an access road, limited parking, and a small picnic area at this location. This measure would include improvements and expansion of existing facilities.
- **R2** *Public Boat Ramp* – This measure would include construction of a public boat access ramp on the east bankline of Soldwedel Lake.

- **R3** *Fishing Pier* – This measure would include construction of a public fishing pier on the east bankline of Soldwedel Lake.
- **R4** *Trails* - If dredge placement on the East bankline were included in the recommended plan, portions of walking trails would be located here. This measure includes walking trails along the east bankline of Soldwedel Lake and possibly along any of the cross levee measures.

Aquatic Structures. Originally, it was thought that aquatic structures could be added to enhance edge habitat diversity. However, after input from site managers, review of existing conditions, formulation of dredge and sediment removal measures and inclusion of island creation, it was concluded that additional aquatic structures would be redundant and add to total project cost. Therefore, they were no longer considered as part of the study.

Lower End Water Control Structures. This category of potential measures was eliminated due to excessive cost and unsuitability with more fully defined management objects by the non-Federal Sponsor, in particular, the desire to restore deep-water habitats in the Southern Unit. The line of protection for such a management unit would be extremely low. Depths would range from 3-4 feet over current water levels. This would provide limited overwintering benefits for fish and no opportunities restore topographic diversity necessary for mast trees. Therefore, this category of measures was no longer considered as part of the study.

IV. AFFECTED ENVIRONMENT

Pekin Lake SFWA complex consists of six former and current bodies of water separated by moist soil plant communities and bottomland timber. Over time, deposited sediment has filled the former lake basins making most of these water areas dry or too shallow to sustain fisheries during seasonal low water events on the Illinois River. The lakes are Soldwedel Lake, Worley Lake, Lake of the Woods, Slim Lake, Round Lake, and Little Round Pond. Pekin Lake SFWA provides habitat for many fish and wildlife species in a relatively urban area. It is located along the migratory flyway and provides important habitat for neotropical migratory birds; as well as feeding and nesting habitat for waterfowl, shorebirds and wading birds.

The area covers approximately 1072 acres that currently contains approximately 55 acres of shallow open water; 393 acres of moist soil, mud flat, and emergent areas; 220 acres of scrub shrub (predominately willows invading the moist soil areas); and 404 acres of forested wetland and bottomland hardwood forest. [Total acreage for real estate purposes is listed at around 438 acres, which includes grants, easements, and rights-of-way, some of which may be roads, maintained ditches, or other areas of minimal habitat not contained in the assessment above.]

Channels, or culverts, through manmade levees and causeways, connect all the lake basins. The connecting channel to the Illinois River is located at the south end of Soldwedel Lake, near the Illinois Route 9 road bridge. The only water control structure at the site is a

nonfunctioning, east-west chevron shaped levee that was constructed many years ago to retain water in Worley Lake, Upper Lake of the Woods, Round Lake, and Slim Lake for the purpose of waterfowl hunting. A causeway was constructed approximately 600 feet north of this levee to provide access and footings for the CILCO electric transmission towers and overhead lines.

An altered hydrologic regime and sedimentation within Pekin Lake SFWA has resulted in the loss of water depth, causing a general reduction of aquatic habitat and diversity within the wildlife area. While there is still good habitat within the Pekin Lake complex, it has degraded over time and will continue to do so if steps are not taken to improve the situation.

Dredging would take place in shallow open water over approximately 46 acres. Five small islands would be constructed in shallow open water and cover a total area of approximately 4.3 acres. Placement of dredged material would cover approximately 38.5 acres of wetland consisting of mostly willow scrub shrub.

A privately owned quarry, which is no longer in use, and land adjacent to that quarry were previously considered as a placement site in earlier alternatives of the proposed project. It is located at the approximate midway point of Pekin Lake SFWA and across the highway east of the wildlife area. While this area is no longer being considered as part of the Federal project, the City of Pekin may wish to pursue placement of dredged material on the land adjacent to the quarry site. The IDNR recently investigated the area and classified the quarry as a wetland, but the majority of land adjacent to it is disturbed upland in an urban/industrial semi developed area. The City of Pekin would like to have material placed on roughly 17 acres of this upland area so that it could be developed. The material would likely be taken from area 8 (see EA-3), which is approximately 7.6 acres of additional dredging in open water adjacent to dredging area 2. It is included in this document because it is unlikely that the City would pursue dredging and placement on this site without the Federal project. The Corps has determined that it has no regulatory authority over the isolated wetland area.

V. ENVIRONMENTAL IMPACTS OF THE PREFERRED ALTERNATIVE

While construction activities would be temporarily disruptive to the area, the overall result would be long-term benefits of increased aquatic and terrestrial diversity, as well as increased longevity for the wildlife complex. Temporary impacts during placement of shore pipe for hydraulic placement activities in riparian areas would be limited to minimal clearing of some shrubbery and herbaceous vegetation or minimal disturbance of vegetation. Much of this vegetation would grow back within a short time after project activities within the area have ended.

Placement of the dredged material would impact roughly 38.5 acres of wetland/willow scrub shrub between Lake of the Woods and Soldwedel Lake at **Site B** and **Site E**. This placement area currently has an elevation of around 436 NGVD, which has allowed

willows to grow but frequent water level fluctuation and inundation currently prevents the establishment of most other trees. The average annual high water level is 446.8 feet NGVD, and the 90% and 10% exceedances are 442.7 and 452.1 feet. Sometimes high water events last for days and even weeks. Willows survive these events and currently provide wetland scrub shrub habitat on the site. Sedimentation from frequent flooding would eventually raise the elevation of the area and a bottomland forest would ultimately develop at the site, but that would likely take several generations to accomplish.

Construction of the five small islands would remove approximately 2 acres of marginal aquatic habitat from the complex. It is anticipated that the larger, 1-acre island and the two geo-tube ring constructed islands would last the life of the project. It is unknown at this time how long the other two smaller islands would last. The IDNR would observe them over the project life to see how they hold up compared to the geo-tube ring constructed islands. Because these are only sample islands to observe how they might be effected by natural processes in a backwater area, no additional construction activity would take place after they are constructed.

The IDNR would like to reintroduce a mast tree component to the complex. The current hydrologic regime and land elevations are not favorable for the production of mast trees at this time. Proposed placement of the dredged material at **Site B** and **Site E** to the proposed elevations would still allow the placement sites to maintain a hydrological regime that would let them continue to function as wetlands, thus producing no net loss of wetlands. It would also raise the land elevation at the sites enough to allow rapid development of a bottomland forest with the potential for the introduction of mast trees at **Site B**.

The lake bottom material within Pekin Lake SFWA is mainly fine silt and clay with little sand mixed in. The general shallowness of the lakes within the complex while providing some fisheries habitat would be greatly improved if dredged. The lake bottoms have very little depth diversity and only provide adequate habitat when flooded. When the water recedes, fish trapped in the lower lakes have little chance of survival as water temperatures increase during the warmer summer days and dissolved oxygen (DO) decreases. While access to the river is sometimes maintained in the lower end of the lake complex, the shallowness of the area and lack of depth diversity only provides habitat for the most tolerant of fish species. The proposed project would provide needed depth diversity and over wintering habitat to the aquatic environment of the Illinois River by providing deep-water holes and shallow shelves in current open-water areas of the lower lakes.

The removal of large trees is not anticipated at this time and would be avoided wherever possible. However, if necessary, removal would be kept to the absolute minimum required for any project construction or dredged material placement and any peeling or loose-barked trees of 11 inches or greater in diameter at breast height needing to be removed would **only** be removed between September 30th and April 1st to avoid impacts to indiana bats.

Invading willows in the lower lakes at **Sites B** and **E** would be mostly buried by the placement of the dredged material. However, the wetland area impacted would still maintain a wetland hydrology and an improved, more diverse vegetative community would

develop in a relatively short time. Since the higher elevations would not be inundated quite as frequently, they would now be able to support mast tree production. The proposed project would therefore improve wetland functions and values within the Pekin Lake SFWA while maintaining no net loss of wetlands.

Potential placement of dredged material by the City of Pekin on upland adjacent to the abandoned quarry would raise a low area and allow the city to develop this area. The site covers approximately 17 and is located on the east side of Highway 29 in a developing section of Pekin, Illinois. Currently there is a business complex to the north and northwest, housing developments to the east, another quarry to the southeast, a cemetery to the south, and four-lane highway to the west. The quarry is shallow with sandy soils in and around it. There is a mixed component of scrub shrub, open grass/weed areas, and some scattered trees within the immediate area of the quarry. The IDNR has made a site assessment and designated the quarry and immediate area as wetland. The rest of the area near the quarry where the City wants dredged material placed is highly disturbed upland with an invasive weedy component.

Effects of the preferred alternative are summarized in Table EA-1.

A. Created Resources. The proposed project is located in the La Grange Pool on the Illinois River, a component of the Upper Mississippi River Navigation System. The project would affect what could be considered a created resource. La Grange Pool, with its shoreline, islands, and backwaters, is a natural resource modified by man to facilitate waterborne commerce on the UMR (Upper Mississippi River) system. The river's backwater areas are essential to commercial fisheries on the Illinois River. The series of pools, the main channel, and backwater areas were created and are controlled by operation of the locks and dams in conjunction with other components of the UMR 9-Foot Channel Navigation Project. Construction of this project would help to counteract the effects of sediment accretion within Pekin Lake SFWA and provide improved aquatic and terrestrial habitat diversity of the Southern Unit.

B. Natural Resources. Even though somewhat degraded, Pekin Lake SFWA still provides quality habitat for several species in a fairly well developed area along the Illinois River. The history of the area shows that it has always been regarded as an important natural area and this is one of the reasons that it has remained relatively intact and undeveloped over the years. The wildlife area is home to a variety of species, both terrestrial and aquatic.

There is a historic heron rookery on the upper northwest shore of Worley Lake. Our project would not have any adverse impacts to the existing heron rookery. Construction activity in the lower lakes would be too far away to disturb the rookery.

Fishery Resources. Pekin Lake SFWA currently provides spawning and nursery habitat for Illinois River fishes. High river stages during spring provide fish access to off channel spawning sites. As spring floods subside, the fish produced in Pekin Lake SFWA are drained back into the LaGrange Pool of the Illinois River. This recruitment of fish is a

critical fishery function of the site and is essential to the aquatic health and vitality of the Illinois River. The proposed project would improve fishery resources by adding a deep-water component to the area and provide over-wintering habitat.

The staff at the Illinois River Biological Station (IRBS) has been collecting fish data from the Pekin Lake complex since 1995. Boat access to Pekin Lake SFWA is limited throughout much of the year due to low water levels. However, 5,470 fish including 32 taxa have been collected using mainly fyke, minnow fyke, and electrofishing gears since 1995. The top five most abundant species collected over the period of record were gizzard shad (*Dorosoma cepedianum)*, white bass (*Morone chrysops)*, common carp (*Cyprinus carpio)*, emerald shiner (*Notropis atherinoides)*, and black bullhead (*Ameiurus melas)*. In addition to fish, one common snapping turtle (*Chelydra serpentina)* and one red-eared slider (*Chrysemys scripta)* were also collected at Soldwedel Lake. (Personal Com. Mark Pegg, INHS and LTRMP Website).

TABLE EA-2

Effects of the Preferred Action on Natural Resources and Historic Properties

Types of Resources	Authorities	Measurement of Effects
Air quality	Clean Air Act, as amended (42 U.S.C. 165h-7, et seq.)	No significant effect
Areas of particular concern within the coastal zone	Coastal Zone Management Act of 1972, as amended	Not present in planning area
Endangered and threatened species critical habitat	Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et seq.)	No adverse impacts anticipated
Fish and wildlife	Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.)	No adverse impacts anticipated
Floodplains	Executive Order 11988, Flood Plain Management	No significant effect
Historic and cultural properties	National Historic Preservation Act of 1966, as amended (16 U.S.C. 470, et seq.)	No significant effect
Prime and unique farmland	CEQ Memorandum of August 11, 1980; Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act	Not present in planning area
Water quality	Clean Water Act of 1977, as	No significant effect

	amended (33 U.S.C. 1251, et seq.)	
Wetlands	Executive Order 11990, Protection of Wetlands, 24 May 1977	No net loss of wetlands
Wild and scenic rivers	Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271, et seq.)	Not present in planning area

Forest Resources. Floodplain forests within Pekin Lake SFWA occupy approximately 633 acres and consist of tree species typical of a seasonally flooded riparian area in a river bottom. Cottonwood, silver maple, green ash, black willow (*Salix nigra*), and boxelder (*Acer negundo*) constitute the most prevalent tree species at the Pekin Lake SFWA. The hydrologic regime of the Illinois River has probably been the single largest factor in determining the forest condition at Pekin Lake SFWA, though historic logging, fire suppression, and disruption of other disturbance regimes have influenced forest structure.

The three soil types present are Jules silt loam, Lawson silt loam, and Landes fine sandy loam. These soils are listed in the *Soil Survey* as being frequently flooded, except Jules, which is listed as occasionally flooded. There is some likelihood that other bottomland hardwood species such as hackberry (*Celtis occidentalis*), pecan (*Carya illinoensis*), pin oak (*Quercus palustris*), shingle oak (*Quercus imbricaria*), bur oak (*Quercus macrocarpa*) and black walnut (*Juglans nigra*) may have occurred in this area (especially in the higher and drier sites) in the past but may have been eliminated by cutting and changes in hydrology. The proposed project would add the element of higher ground elevation at placement **Site B** and mast trees would be planted to restore that component to Pekin Lake SFWA.

Waterfowl. In years of low river levels throughout the summer, the area provides very important pasture for Canada geese. This area also provides important brood habitat for mallards, wood duck, and Canada geese. The project would provide improved resources for these species.

The area was opened to public waterfowl hunting in 1979. Currently, 12 blinds are allocated by an annual draw and hunted in compliance with statewide regulations. The blinds are located on Lower and Upper Lake of the Woods and on Slim Lake. The remaining areas of Pekin Lake SFWA (south of Lick Creek), including Lower Lake of the Woods, Soldwedel Lake, and Worley Lake, are managed as a refuge with no entry between 7 days prior to the opening of the regular waterfowl season through the close of the waterfowl season (including the late goose season).

Waterfowl usage of the site is recorded in periodic aerial inventory data collected by the Illinois State Water Survey. Inventories include information on numbers of individuals of various species of ducks and geese as well as some information on bald eagles and double-crested cormorants. Most flights were on a weekly basis when the weather permitted: fall (September-December): weekly 1949-1956, 1964-1966, 1971-2000 and spring (February-April): 1956, 1958, 1960, 1961, 1974, 1976-1985, 1987, 1990-2001. The project would provide improved resources for waterfowl.

Shorebirds. During low-water periods, large numbers of shorebirds feed in shallow water and exposed mud flats at Pekin Lake SFWA during their spring and especially fall migrations. Different species migrate at different times, but overall the spring migration is from mid-March through June, and the fall migration is from early July through early November.

All shorebirds consume invertebrates, but different shorebird species prefer different foraging water depth and vegetation height and density conditions. A range of habitats is needed to support a diverse species assemblage. Variations in elevation at Pekin Lake SFWA allow a variety of foraging conditions at the same time. High shorebird use and high quality habitats led to an application to the American Bird Conservancy has been made nominating the area as a Nationally Important Bird Area. The project would provide improved resources for shorebirds.

Wading Birds. Large numbers of wading birds (herons, egrets, and night herons) nest and feed in the Pekin Lake SFWA. This is consistently one of the largest rookeries on the Illinois River and has been active since at least 1935, except from 1973-1985 when logging caused rookery abandonment.

Wading birds forage in Pekin Lake SFWA throughout much of the year, except during floods or when the lake is frozen. These birds feed primarily on fish, but also on frogs, insects, crayfish, and small vertebrates. Great blue herons and great egrets require water depths between a few inches and 2 – 3 feet deep for foraging. Black-crowned night herons are smaller and forage in water less than 6 inches deep. High water not only eliminates foraging areas, but also results in dispersal of fish over a larger body of water, which compromises the quality of foraging habitat. Water depth is not only important for foraging habitat but also for maintaining the heron rookery trees.

Each wading bird species has somewhat different timing, but in general, they arrive in February and March, lay eggs from March to June, and the nestlings develop and fledge between June and August. The most critical time to provide adequate water depths for these birds is during nesting and fledging.

By adding depth diversity in the lower unit of the, the proposed project would allow the IDNR to better meet the goals and objectives of their management plan for shore and wading birds within Pekin Lake SFWA.

Aquatic Vegetation. Staff at the IRBS began monitoring submerged aquatic vegetation within La Grange Pool of the Illinois River in 1991. Pekin Lake SFWA was not included in this sampling until 1998 when a stratified random sampling (SRS) design was implemented. Sampling within Pekin Lake SFWA has taken place yearly from 1998 through 2001. No submerged aquatic vegetation has been found within Pekin Lake SFWA and surrounding area. Water depths taken during sampling varied depending on river stage from exposed mudflats to almost 13 feet. Substrate was dominated by silt and clay. Lack of submersed aquatic vegetation is probably due to a combination of biotic and abiotic factors, including water level fluctuation, increased sedimentation, and poor water quality, as well as uprooting and herbivory by fishes and waterfowl (Personal Com. Mark Pegg, INHS, and LTRMP website).

C. <u>Endangered Species</u>. Three Federally threatened or endangered species are listed for Tazewell County, Illinois: the threatened bald eagle (*Haliaeetus leucocephalus*), the threatened floodplain species decurrent false aster (*Boltonia*

decurrens), and the threatened lakeside daisy (*Hymenoxys herbacea*). The Indiana bat (*Myotis sodalis*), while a federally endangered species, is not federally listed as currently found in the counties surrounding the project site. However, it is listed by Illinois as potentially occurring throughout the State of Illinois.

The bald eagle was listed in 1978 as an endangered species in 43 states and threatened in 5. In recent years, bald eagle numbers have increased dramatically. The bald eagle has expanded its distribution throughout the United States, and its protected status was changed in 1995 from endangered to threatened throughout the lower 48 states. In July 1999, the U.S. Fish and Wildlife Service announced the proposed rule to remove the bald eagle from the Federal List of Endangered and Threatened Wildlife. The bald eagle is still listed as threatened as of this writing.

The bald eagle normally migrates south to overwinter along major river systems, such as the Mississippi and Illinois Rivers. Eagles usually begin arriving in the area around late November or early December. They forage for fish where they can find open water, such as the tailwaters below the locks and dams. The eagles rest and loaf in the larger trees and snags along the shoreline. These trees provide excellent vantage points for fishing. In the evening, the eagles seek shelter in roost trees that provide protection from winter weather. Tazewell County is listed as "wintering" habitat for the bald eagle. There was a known eagle nest along the river near the downstream end of the wildlife area, however the tree that it was in blew down last year (2003) and as of the writing of this document, eagles have not established a new nest.

The project would not adversely impact the bald eagle or any existing eagle nest. At this time, all dredging and placement activities are located well away from the location of the former nest. If a new nest is discovered, any construction activity within 330 feet of that eagle nest would be prohibited and no construction activity would be allowed within 660 feet of any nest between February 15 and October 1. The project would provide improved forestry and fishery resources for this species.

The decurrent false aster occurs along approximately 250 miles of the Illinois River and nearby parts of the Mississippi River. Decurrent false aster is an early successional species that requires either natural or human disturbance to create and maintain suitable habitat. Its natural habitat was wet prairies, shallow marshes, and shores of open rivers, creeks, and lakes. In the past, annual flood/drought cycles of the Illinois River floodplain provided the natural disturbance required by this species. Annual spring flooding created open, high light habitat and reduced competition by killing other less tolerant, early successional species.

The decurrent false aster is known to occur in floodplain areas of Tazewell and Woodford Counties, Illinois. The state and federally threatened plant, grows at several locations in the northern part of the Pekin Lake SFWA. Information from onsite IDNR staff indicates that no *Boltonia decurrens* plants are located at either proposed placement site. Therefore no adverse impact to this species is anticipated from the proposed project and placement of the dredged material would provide improved resources for this species.

The lakeside daisy is known to occur in Tazewell County, where it has been introduced. It is a perennial herb with flowering stalks, 2-10 inches tall, arising from basal tufts of leaves. When the plants are not in bloom, the small tufts of leaves are easily overlooked, but in bloom (late April-June), the plants are extremely showy, with populations simultaneously producing masses of large (1- to 1-1/2 inch in diameter) yellow flower heads. It requires full sun and can be found in dry calcareous sites, specifically in thin soils over limestone or dolomite outcrops/exposures and in dry limestone prairies. There are no dry calcareous sites within the Pekin Lake SFWA, nor is this plant species known to occur there. Therefore, no adverse impact to this species is anticipated from the proposed project.

The Indiana bat is a migratory species that occurs throughout much of the eastern United States, including Illinois. It may forage for insects along river and stream corridors in floodplain, riparian, and upland forests, old fields, crop borders, and along wooded fencerows. They have been found to forage from between 6 to 100 feet above the ground and over streams greater than 6 feet wide. The Indiana bat prefers habitat containing dead trees with loose bark to establish nursing sites. Caves are utilized in winter for hibernation. Tree removal is not anticipated at this time and would be avoided wherever possible. If required, it would be kept to the absolute minimum essential for project construction and trees with peeling or loose-barked trees of 11 inches or greater in diameter at breast height would **only** be removed between September 30th and April 1st. Therefore, no adverse impact to the Indiana bat is anticipated from the proposed project.

D. Historic Properties. The Corps conducted an archival search for historic properties following the **Policy and Procedures for the Conduct of Underwater Historic Resource Surveys for Maintenance Dredging and Corps Activities** (DGL-89-01, March 1989). The Corps queried the most updated Illinois Geographic Information Systems (GIS) site file database and reviewed The Historic Properties Management Plan for the Illinois Waterway System, Rock Island District, Corps of Engineers, Volumes I and II, dated February 1999 (Contract Number DACW25-93-D-0014, Delivery Order No. 0021) for historic properties potentially affected by this Project. No historic properties were documented within the Project area under evaluation, although areas along the bankline have been subjected to various dredged material placement sites. No previously reported or recorded historic properties are documented within the areas of proposed watershed restoration measures (area of potential effect) for the Pekin Lake Project, although undocumented archeological historic properties may exist, due to the proximity of previously reported and recorded sites.

The proposed Project area is documented in the Landform Sediment Assemblage (LSA) Units in the Illinois River Valley and the Lower Des Plaines River Valley, Volume I, dated May 2000, and Volume II, dated June 2000 (Contract No. DACW25-93-D-0014, Delivery Order No. 0025), as sediments deposited as natural levees, undifferentiated buried deposits, and alluvial fans, all with low to high potential for surface and buried historic properties.

In July 1993, the Illinois Historic Preservation Agency (IHPA) and the Corps' Rock Island District determined that portions of the Illinois Water Way (IWW) Navigation Channel, from River Mile 80.2 to 327.0, were eligible for listing on the National Register of Historic Places (NRHP). In October 1996, the Rock Island District surveyed 331 buildings and structures and identified 8 historic districts, eligible to the NRHP as the Multiple Property **Chicago to Grafton, Illinois, Navigable Water Link, 1839-1945**. The Corps Architectural and Engineering Resources of the Illinois Waterway Between 130th Street in Chicago and La Grange, Volumes I and II documents the 2 contributing resources within the 8 historic districts, consisting of the 7 Lock and Dam facilities and the IWW Project Office.

The final NRHP Nomination Registration Form was accepted by the IHPA in January 2002. The significant portions of the IWW are formally designated as the "**Historic Resources of the Illinois Waterway Navigation System, 1808-1951**." With the endorsement of the Corps' Washington Headquarters, the **Historic Resources of the Illinois Waterway Navigation System, 1808-1951** nomination forms will be formerly submitted to the National Park Service for evaluation and listing. As part of the **Historic Resources of the Illinois Waterway Navigation System, 1808-1951**, the Peoria Lock and Dam Historic District is located at 1071 Wesley Road, Creve Coeur, approximate Illinois River Mile 158, directly upstream of the project.

Due to the potential for archeological historic properties in the floodplain and upland under evaluation, the Corps proposed a Phase I Intensive Archeological Survey within the project area. The Phase I survey of the floodplain will include hand and mechanical methods of deep testing to search for deeply buried historic properties. Pursuant to Section 800.3 of the Advisory Council on Historic Preservation (ACHP) regulations and to meet the responsibilities under the National Environmental Policy Act of 1969, the Corps and the IDNR developed a preliminary Consulting Parties List. All consulting parties were notified of the program and were asked to respond to remain on the enclosed final Consulting Parties List. Allowing for tribal and other consulting parties review and comment on the project and proposal contributes to fulfilling Corps obligations as set forth in the NHPA (PL 89-665), as amended; the National Environmental Policy Act of 1969 (PL 91-190); Executive Order (EO) 11593 for the "Protection and Enhancement of the Cultural Environment" (Federal Register, May 13, 1971); the Archaeological and Historical Preservation Act of 1974 (PL 93-291); the ACHP "Regulations for the Protection of Historic and Cultural Properties" (36 CFR, Part 800); and the applicable National Park Service and Corps regulations.

The Corps contacted the Illinois State Historic Preservation Office, IHPA, Springfield, Illinois, and those interested parties listed on the final Consulting Parties List by letter dated 11 June 2002 (Appendix EA-B). By copy of this letter, those on the final Consulting Parties List are asked to review the Project within 30 days, as accorded by CFR Part 800.5(a)(3)(c). Any request for site locations by any consulting party will require the comment of the IHPA, Springfield, Illinois. The Corps requested notification of any other interested parties for inclusion in future coordination of the Pekin Lake Project. By concurrence stamp dated 30 June 2002, the IHPA concurred with the Corps' proposed

Phase I archeological survey (Appendix EA-B), IHPA Log #0206170015H-T). By letter dated 3 July 2002, The IDNR requested staff be contacted prior to any archeological fieldwork at the Pekin Lake Project (Appendix EA-B).

This Phase I is documented in the draft Archaeological Survey Short Report (ASSR) entitled Phase I Archaeological and Geomorphological Survey for the Pekin Lake Site-Specific Project, Illinois River Ecosystem Restoration Feasibility Study, Tazewell County, Illinois, dated February 2003 (Illinois State Museum Society Archaeological Survey Report No. 2003-1565-2). The Illinois State Museum Society, Springfield, Illinois, prepared the report under Corps Indefinite Deliveries Contract Number DACW25-98-D-0017, Delivery Order No. 0025. The Phase I survey on IDNR lands was conducted under the Application and Permit for Conducting Archaeological Work on Department of Natural Resources Owned and Managed Lands, executed by Dr. Harold Hassen on 16 July 2002

The Corps forwarded the draft ASSR report to the IHPA by letter, dated 1 May 2003, with the Corps determination of No Historic Properties Affected. According to the ASSR, one historic property exits within the project area. The Boley Ice House Company Dam (11T422) and appurtenant debris has been recorded as a site, but is not considered potentially eligible for the National Register of Historic Places due to its lack of integrity. For the area north of the railroad tracks on Pekin Lake land owned or operated by the IDNR, the Corps determines No Historic Properties Affected.

In response to the Corps letter forwarding the draft ASSR and the Corps determination resulted in comment from the IHPA dated 14 May 2003 (IHPA LOG #015061702, Old PrjID: 2006170015H-T). According to the IHPA, "The Phase I survey and assessment of the archaeological resources appear to be adequate. Accordingly, we concur with your determination, based upon this report, that no significant historic, architectural, and archaeological resources are located in the project area" (Appendix EA-B).

Consulting parties were notified of the IHPA findings and provided copies of the draft ASSR, pursuant to Section 800.14(b) of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470[f]) (NHPA), and Section 110(f) of the same Act (16 U.S.C. 470h-2[f]). The Corps had previously invited the State Historic Preservation Officer (SHPO), Council, Tribal Historic Preservation Officers, and any other interested parties to participate in the consultation process.

The Corps is concerned about impacts to those traditional cultural properties and sacred sites recognized by Native Americans, tribes, ethnic and religious organizations, communities, and other groups as potentially affected by the IRER. Presently, the Corps is unaware of any traditional cultural properties or sacred sites within the Illinois River watershed. Traditional Cultural Property location and ancillary information may not be disclosed to the public pursuant to Section 304 of the NHPA, consulting parties not to disclose locations; the Corps will secure this information from the general public. All consulting parties must be aware that the specific locations of historic and archaeological properties are subject to protection through nondisclosure under Section 304 of the National Historic Preservation Act. All maps subject to public review/access shall not

contain any information on archeological sites. This information is not to be released in order to protect the resources at the sites. The final copies of the Phase I ASSR documenting compliance with the NHPA are held in the permanent files of the Corps and the IHPA. All consulting parties were notified that any request for reports containing site location/information would require the comment of the IHPA, State Historic Preservation Officer, Springfield, Illinois.

Although the Corps has documented compliance with the NHPA and that no significant historic properties will be affected by the proposed Pekin Lake Project; if any undocumented historic properties are identified or encountered during the undertaking, the Corps will discontinue all construction, and ancillary construction activities and resume coordination with the IHPA and appropriate consulting parties to identify the significance of the historic property and determine potential effects under Section 106 of the National Historic Preservation Act of 1966 and 36 CFR Part 800.

If human remains, funerary objects, sacred objects, or objects of cultural patrimony are encountered or collected, the Corps will comply with all provisions outlined in the appropriate state acts, statutes, guidance, provisions, etc., and any decisions regarding the treatment of human remains will be made recognizing the rights of lineal descendants, Tribes, and other Native American Indians and under consultation with the SHPO/Tribal Historic Preservation Officer (THPO)(s) and the other consulting parties, designated Tribal Coordinator, and/or other appropriate legal authority for future and expedient disposition or curation. When finds of human remains, funerary objects, sacred objects, or objects of cultural patrimony are encountered or collected from Federal lands or federally recognized tribal lands, the Corps will coordinate with the appropriate federally recognized Native American Tribes, pursuant to the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. § 3001 *et seq*.) and its implementing regulations (43 CFR Part 10).

E. Air Quality. Minor, temporary increases in noise levels and airborne particulates are anticipated to occur as a result of mobilization and use of dredging equipment. However, wind would generally dispel any exhaust fumes. Disturbances to nearby wildlife, residents, and businesses would be minimal, and no air quality standards would be violated.

F. Water Quality. Temporary increases in turbidity would occur during the dredging and placement action, but turbidity levels are expected to return to pre-project levels once operation activities cease. The mechanically dredged material would be used to create berms for the hydraulically dredged material to be placed behind and allowed to settle and dewater. The return water would be contained until it eventually settles out. The project **would not increase pollutant loading** to the Illinois River and only produce marginal, **temporary impacts to water quality** during construction of the project from disturbance of sediments. The goal of the project is to improve water quality within the Pekin Lake SFWA. A Clean Water Act Section 404(b)(1) Evaluation has been prepared to address the discharge of dredged or fill material into waters of the United States and is attached as EA Appendix A.

G. Miscellaneous Resources. No mines or mineral resources would be impacted if the proposed project were constructed. A Phase I & IIA Hazardous, Toxic and Radioactive Waste Site Assessments were conducted as part of this study. No known hazardous or toxic waste sites are located within the area to be dredged or on the proposed placement sites.

VI. CUMULATIVE IMPACTS.

The Rock Island District identified floodplain bottomland hardwood forest in the riparian corridor, moist soil vegetation, and backwater aquatic habitat as the primary resources for improvement by this ecologic restoration project. These habitats (and others) were quantified by a query of land cover/use from 1989 landsat thematic mapper data using the United States Geological Survey's *Habitat Needs Assessment* (HNA) query tool. Systemic changes have been discussed in the *Ecological Status and Trends of the Upper Mississippi River System 1998* and the *Habitat Needs Assessment for the Upper Mississippi River System Technical Report,* dated October 2000. The HNA was conducted to: "describe historical and existing conditions, identify objectives for future habitat conditions, define habitat needs at system-wide, reach, and pool scales, address a variety of habitat requirements including physical, chemical, and biological parameters, address the unique habitat needs of distinct river reaches, pools, and the system, and be a collaborative, technically sound and consensus based effort."

Table EA-2 shows HNA land cover classes found in Peoria and La Grange Pools within the floodplain. Of the 17 classes identified, only 7 were found to occur within the two pools with the majority being agriculture (51%), open water (21%), and wet mesic forest (16%). The other 4 categories found are: grassland and developed (both around 4%), permanent flooded emergent perennial (3%), and sand/mud (>1%).

Table EA-3 HNA Land Cover Class In Acres

HNA Land Cover Class	Peoria Pool	La Grange Pool	Total
Open Water	40,070	34,660	74,730
Submersed Aquatic Vegetation	0	0	0
Floating-Leaved Aquatic Bed	0	0	0
Permanent Flooded Emergent Annual	0	0	0
Permanent Flooded Emergent Perennial	5,416	4,806	10,222
Seasonally Flooded Emergent Annual	0	0	0
Seasonally Flooded Emergent Perennial	0	0	0
Wet Medow	0	0	0
Grassland	7,292	8,294	15,586
Scrub/Shrub Wetland	0	0	0
Salix Community	0	0	0
Populus Community	0	0	0
Wet Mesic Forest	19,501	38,097	57,598
Mesic Bottomland Hardwood Forest	0	0	0

Agriculture	49,153	131,803	180,956
Developed	9,832	3,511	13,343
Sand/Mud	52	55	107
No Photo Coverage	0	1	1
Total	**131,316**	**221,227**	**352,543**

Past Actions – Environmental restoration projects on the Upper Mississippi River System (UMRS) have been undertaken through a variety of private local and regional clubs and organizations, State governmental agencies, U.S. FWS, and the Corps in partnership with State agencies through the Environmental Management Program (EMP) and the Section 1135 and Section 206 programs. While Sections 1135 and 206 are relatively new authorizations under which the Corps performs environmental restoration, the majority of our restoration efforts have been done under the EMP. All EMP projects have taken place on the mainstem of the Mississippi or the Illinois Rivers. Under the EMP, 28 habitat projects have been completed and twelve are currently under construction. Only 5 EMP projects have been constructed on the Illinois branch of the UMRS and a 6th is in the planning stages. A 7th area (Alton Lake) is proposed as a "Future Opportunity". Twenty-four of the completed EMP projects affect approximately 28,000 acres of aquatic and floodplain habitat.

Section 1135 and 206 generally provide ecosystem restoration on a much smaller scale. Five restoration projects have been completed or are near completion under Section 1135. All were done on the Mississippi River and affected approximately 5,000 acres. No Section 206 projects have been constructed at this time.

Present Actions – Approximately thirteen EMP projects are currently in various stages of planning and design. These additional projects under construction will increase the area affected by EMP to about 97,000 acres, which is approximately 11% of the total UMRS floodplain and aquatic habitat area, not counting agricultural and urban areas. About 20 Section 206 projects are currently in various stages of feasibility, but none are ready to go to construction at this time. The total area impacted by those 5-6 proposed Section 206 projects that are farthest along would be less than 1000 acres. While a majority of the current Section 206 projects are located in Illinois, they are not located on the mainstem of the Illinois River.

If the proposed Peoria Riverfront Development (Ecosystem Restoration) Study is approved, plans and specifications would be developed over the next year and the project would then be ready to go to construction. The proposed project would construct 3 islands for a total of approximately 75 acres and create approximately 200 acres of 4 to 8-foot deep aquatic habitat within lower Peoria Pool.

The Pekin Lake Northern Unit project is currently being considered for authorization and funding. When constructed, the IDNR will have improved water level management of the upper unit of the SFWA complex and an area being invaded by willows would be replaced with moist soil plants.

Reasonably Foreseeable Future Actions –With the authorization of the Illinois River Basin Restoration Feasibility Study, it is anticipated that more projects like the restoration project proposed for Pekin Lake would be developed and pursued. The overall goal of these restoration projects is to enhance the environment by rehabilitating declining habitat and/or also work to reduce the sediment input into the Illinois River, thereby improving the ecosystem as a whole. The size and number of projects developed would depend on Congressional funding and willing non-federal cost share sponsors.

The Corps Navigation Study has also proposed ecosystem restoration measures for the Upper Mississippi River Basin (Illinois River and Mississippi Rivers) in 5 states under a 50-year plan with and initial 15-year implementation plan at a cost of $1.46 billion.. The State of Illinois cost share is estimated to be $66.8 million. Implementation of the 5 state 50 year restoration and management plan would improve over 400,000 acres of floodplain and river habitat and improve fish access to 2,500 miles of mainstem and tributary river channels. These measures include items such as: island building, floodplain restoration, water level management, backwater restoration, side channel restoration, wing dam/dike alterations and shoreline protection. Proposed improvements to Peoria Lock and Dam consist of a new 1200 ft. lock chamber. Impacts were evaluated in the Environmental Impact Statement for the Study and no downstream impacts to Pekin Lake SFWA were identified.

Reasonably Foreseeable Future Actions in La Grange and Peoria Pools - These and other future restoration projects may affect additional floodplain bottomland hardwood forest in the riparian corridor, moist soil vegetation, and backwater aquatic habitat, and potentially floodplain agricultural field habitat within the La Grange and Peoria Pools. Investigations are ongoing to develop potential projects within the general watershed of the Peoria and La Grange Pool, however there are no specific projects proposed or being considered at this time (other than those already specifically mentioned) that would take place within the Peoria and La Grange Pools

Associated Actions in La Grange and Peoria Pools – Dredging of the navigation channel by the Corps would continue to take place with 18 Dredged Material Management Plans (DMMP) active or proposed for the 77.4 miles of the La Grange Pool and 9 DMMPs active or proposed for the 73 miles of the Peoria Pool. Dredging would also take place for the island construction proposed in the upper portion of Lower Peoria Lake. Because of high sedimentation rates on the Illinois River, there would also be a large amount of private dredging to remove sediments from harbors and barge docking areas.

Approximately 2% of these actions have related to ecosystem restoration while a total of 47% percent related directly to dredging. Only 3% have been federal dredging projects, (generally main channel dredging) and the other 44% non-federal dredging projects (mostly harbor maintenance). Table EA-3 displays the regulatory actions that have occurred in and adjacent to Peoria and La Grange Pools since 1960. These include Section 10 (construction of structures in navigable waters, not involving dredged or fill material) and Section 404 (construction projects that affect the waters of the United States) regulatory actions. The District evaluates the impact of these regulatory actions on a

continuous and ongoing basis, actively soliciting responses to these actions from the public, State, and other Federal agencies through the Clean Water Act permit process.

Table EA-4 Regulatory Permits Issued from 1960-Present In Peoria and La Grange Pools

	La Grange Pool 1960's	Peoria Pool 1960's	La Grange Pool 1970's	Peoria Pool 1970's	La Grange Pool 1980's	Peoria Pool 1980's	La Grange Pool 1990's	Peoria Pool 1990's	La Grange Pool 2000's	Peoria Pool 2000's	**TOTAL**
TOTAL*	**46**	**58**	**46**	**98**	**68**	**125**	**73**	**130**	**22**	**1**	**667**
Ecosystem Restoration	0	0	0	0	1	2	2	6	2	0	**13**
Dredging (Federal)	0	0	0	0	3	3	9	3	0	0	**18**
Dredging (Non-Federal)	30	20	30	63	25	45	32	52	0	0	**297**
Bank Stabilization (Federal)	0	0	0	0	4	2	0	1	4	0	**11**
Bank Stabilization (Non-Federal)	2	17	0	9	11	23	11	23	11	0	**107**
Structures (Control)	0	0	0	0	0	0	0	0	0	0	**0**
Structures (Docks)	0	3	2	2	1	12	3	13	3	0	**39**
Structures (Levee)	0	0	0	0	0	0	3	4	0	0	**7**
Structures (Boat Ramp)	1	5	7	6	5	8	4	5	1	1	**43**
Structures (Intake)	2	2	4	1	1	2	0	1	0	0	**13**
Utilities	0	0	0	0	0	0	1	3	0	0	**4**
Bridge Repair	0	0	0	1	2	3	0	0	0	0	**6**
Excavation Clearing	0	0	0	0	1	2	0	7	0	0	**10**
Fill	11	11	2	13	12	21	7	12	0	0	**89**
Other	0	0	1	3	2	2	1	0	1	0	**10**

* Prior to 1980 the District did not issue itself a permit for channel maintenance dredging. These numbers reflect individual dredging events

The District continues to identify practical methods for the quantitative assessment of the cumulative impacts of dredging through impact analysis studies of mussels, plants, sedimentation, invertebrates, and fish pursuant to Section 404 of the Clean Water Act. Findings from these studies will be used in the future consideration of cumulative impacts of dredged material placement on many types of habitat.

The proposed project has identified and taken into account cumulative impacts; considered alternative actions that could lessen such adverse impacts, and is, to the extent practicable, compatible with state, unit of local government, and private programs and policies to protect floodplain agricultural field habitat and bankline habitats. The proposed project would not cumulatively exceed any known biological or social thresholds.

VII. SOCIOECONOMIC IMPACTS OF THE PREFERRED ALTERNATIVE

Community and Regional Growth. No impacts to the growth of the community or region would be realized as a result of the proposed ecosystem restoration projects.

Community Cohesion. The proposed project would not adversely impact community cohesion. Strong interest and support for the recommended plan has been expressed by the City of Pekin and local residents. Also, the City is interested in having material from project dredging placed on the land adjacent to the quarry site.

Displacement of People. No residential displacements would be caused by the proposed restoration project.

Property Values and Tax Revenues. Most of the land is currently in public ownership. The State of Illinois owns all of the property with the exception of the causeway and access points from the railroad and private property. No change in property values or tax revenues would occur.

Public Facilities and Services. The Pekin Lake SFWA is located within the project site. The Pekin Lake SFWA provides numerous public recreation opportunities for fishing, waterfowl hunting, bow hunting, picnicking, small pleasure boating, hiking, and wildlife observation. Upon completion of the ecosystem restoration project, day use, wildlife observation, and bank fishing in the Pekin Lake SFWA are expected to increase significantly. No new public facilities or services would be added.

The Pekin Boat Club is located near the downstream outlet area. The marina has a separate launch area away from the dredging channel; therefore, project dredging in this location would not adversely affect access to the marina.

Electric transmission towers and overhead power lines are located on the causeway between the Northern and Southern Units. Required clearance and access agreements would be observed during project construction to avoid any negative impacts to these facilities.

Life, Health and Safety. There would be no impacts to life, health, or safety. There are no known potential HTRW issues at the proposed sites.

Business and Industrial Growth. Changes in business and industrial activity during the construction of the project would be minimal. The slight increase in business activity occurring from the project would be absorbed into the area without noticeable effect. No long-term impacts to business or industrial activity would result from the proposed project. No business or industrial relocations would be required.

Employment and Labor Force. Project construction could slightly increase short-term employment opportunities in the project area. The project would not directly affect the permanent employment or labor force in Tazewell County, Illinois.

Farm Displacement. No farms or farmsteads would be displaced. No prime and unique farmland would be impacted.

Noise Levels. Heavy machinery would generate an increase in noise levels during project construction; however, no significant disruption to neighboring properties is anticipated. The entire project area is bordered on the east by residential and light commercial properties in the city of Pekin. A large buffer strip of timber and the railroad tracks between the residences and the lake would help diminish noise levels.

Aesthetics. The project area is highly urbanized. Restoration features would be planned and constructed with minimal negative impacts to the aesthetics of the area. The enhancement of natural areas and open space should be aesthetically pleasing and enhance the overall viewscape for residents and visitors.

VIII. ENVIRONMENTAL IMPACTS OF THE NONPREFERRED ALTERNATIVES

Sedimentation on the Illinois River has historically reduced and is likely to continue to reduce the depth of backwater lakes and side channels, deteriorating the natural aquatic resources. Even if relative equilibrium is being established in terms of sediment deposition, it remains very unlikely that the existing degraded habitats would see measurable improvements in the foreseeable future. Water level fluctuations associated with river regulation and human alteration are likely to continue to affect the river and backwater areas.

At Pekin Lake SFWA the net result of changes in river management and historic sedimentation has been the shrinking of the historic Soldwedel Lake volume from an estimated 323 acre-feet in 1903 to 200 acre-feet in recent years. Little Round Pond and Round Lake have virtually filled in and Slim Lake is not far behind. Worley Lake and Lake of the Woods have also lost capacity. With respect to the expected future environmental condition of Pekin Lake SFWA, ongoing water level fluctuations and

sedimentation will likely result in continued limitations or potential further decline in populations of fish and wildlife.

If the no action alternative were implemented for the Southern Unit, there would be no federal involvement at Pekin Lake SFWA. If the IDNR's passive management of the area were to continue, sedimentation within Pekin Lake SFWA would persist as would willow invasion of the area. If left to its natural progression, the area would convert over time from a backwater aquatic environment to a mostly bottomland hardwood forest with isolated areas of marsh lowland or isolated mud flats with virtually no aquatic or fisheries habitat.

Conversely, the draft management plan proposed by the IDNR, if implemented, would work to impede the natural succession by implementing some of the same measures this project proposes to help maintain or improve the backwater aquatic habitat currently there, thus maintaining or slightly improving the area for fisheries habitat, but at full cost to the State of Illinois.

The nonpreferred alternatives for the Southern Unit were all concerned with dredging to some degree. The main difference occurred in the volume of sediments removed and/or the configuration of the areas dredged and where placed. While they generally proposed less dredging than the selected plan, they also produced less variety and aquatic benefits than the selected plan. As a result, they would have impacts similar to the proposed plan, but to a lesser degree.

IX. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Due to the proximity of Pekin Lake SFWA to an urban center and the high recreational use in the vicinity, local wildlife has become accustomed to some level of disturbance. Temporary avoidance of the project area during project activities would cause only short-term and marginal impacts to area wildlife. Access corridors to the dredged material placement sites would be required. These corridors would adversely impact herbaceous vegetation to allow heavy machinery to manipulate and install dredge pipe. Vegetation would be temporarily lost but would quickly return after removal of the pipe following placement.

Placement between Soldwedel Lake and Lake of the Woods would impact a rather large area (approximately 30-38 acres) of scrub/shrub willows. This whole area provides generally poor habitat as it is today. The proposed elevation raise would provide a better foundation for the development of more diverse bottomland forestry with the inclusion of mast trees.

X. RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

The dredging activities of the proposed project would disrupt the wildlife complex for short periods of time during individual events. However, after dredging is completed, the improvements provided by the proposed project would enhance the natural resources of Pekin Lake SFWA. The sediment removed from the area would also increase the life expectancy of Pekin Lake SFWA and provide additional benefits for the 50-year life of the proposed project.

Thus the improvements proposed for Pekin Lake SFWA would provide an immediate increase to overall habitat value in the wildlife complex by increased diversity to the forestry habitat and improved water depths for fisheries as well as providing long-range and long-term fisheries benefits to the La Grange Pool and the Illinois River.

XI. IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF PROJECT IMPLEMENTATION

Fuel consumed, manpower expended, and the commitment of construction materials are considered to be irretrievable.

XII. RELATIONSHIP TO LAND-USE PLANS

The Pekin Lake SFWA is managed by the IDNR for natural resources. The project as proposed would enhance the current land use of the wildlife complex by improving the habitat already found there.

XIII. COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

Tabular summation of compliance can be found in Table EA-4.

A. Endangered Species Act of 1973, as amended. The Corps coordinated with the USFWS as required by the Fish and Wildlife Coordination Act and concerning federally endangered species, as required by the Endangered Species Act of 1973, as amended. The State of Illinois was also consulted for comments as to impacts to State endangered species. The responses received to this coordination can be found in Appendix EA-B. Since the best available information at this time indicates that the work as currently proposed is unlikely to adversely impact any state or federally listed species, the project is in compliance.

TABLE EA-5
Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements

Federal Policies	Compliance
Archaeological and Historic Preservation Act, 16 U.S.C. 469, *et seq.*	Full compliance
Analysis of Impacts on Prime and Unique Farmland (CEQ Memorandum, 11 Aug 80)	Full compliance
Clean Air Act, as amended, 42 U.S.C. 1857h-7, *et seq.*	Full compliance
Clean Water Act, 33 U.S.C. 1251, *et seq.*	Full compliance
Coastal Zone Management Act, 16 U.S.C. 1451, *et seq.*	Not applicable
Endangered Species Act, 16 U.S.C. 1531, *et seq.*	Full compliance
Environmental Effects Abroad of Major Federal Actions (Executive Order 12114)	Not applicable
Estuary Protection Act, 16 U.S.C. 1221, *et seq.*	Not applicable
Farmland Protection Policy Act, 7 U.S.C., 4201, *et seq.*	Full compliance
Federal Water Project Recreation Act, 16 U.S.C. 460-1(12), *et seq.*	Full compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 601, *et seq.*	Full compliance
Flood Plain Management (Executive Order 11988)	Full compliance
Land and Water Conservation Fund Act, 16 U.S.C. 460/-460/-11, *et seq.*	Not applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, *et seq.*	Not applicable
National Economic Development (NED) Plan	Full compliance
National Economic Restoration (NER) Plan	Full compliance
National Environmental Policy Act, 42 U.S.C. 4321, *et seq.*	Full compliance
National Historic Preservation Act, 16 U.S.C. 470a, *et seq.*	Full compliance
Protection of Wetlands (Executive Order 11990)	Full compliance
Rivers and Harbors Act, 33 U.S.C. 403, *et seq.*	Full compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, *et seq.*	Not applicable
Wild and Scenic Rivers Act, 16 U.S.C. 1271, *et seq.*	Full compliance

NOTES:
a. Full compliance. Having met all requirements of the statute for the current stage of planning (either preauthorization or postauthorization).
b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
c. Noncompliance. Violation of a requirement of the statute.
d. Not applicable. No requirements for the statute required; compliance for the current stage of planning.

B. National Historic Preservation Act of 1966, as amended. The Pekin Lake Project is in compliance with the National Historic Preservation Act (NHPA) of 1966, amended through 2000 (NHPA, Public Law 89-665; 16 U.S.C. 470 et seq.). The NHPA and it's implementing regulations 36 CFR Part 800: "Protection of Historic Properties," establishes the primary policy, authority for preservation activities, and compliance procedures. The NHPA ensures early consideration of historic properties preservation in Federal undertakings and the integration of these values in to each agency's mission. The Act declares Federal policy to protect historic sites and values in cooperation with other nations, states, and local governments. The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or Federally assisted undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking, take into account the effect of the undertaking of any district, site building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to such undertaking.

The Chicago, Rock Island, and St. Louis Districts of the U.S. Army Corps of Engineers (Corps), the State of Illinois Department of Natural Resources, the Illinois State Historic Preservation Officer, and the Advisory Council on Historic Preservation executed the final *Programmatic Agreement Among the Chicago, Rock Island, and St. Louis Districts of the U.S. Army Corps of Engineers, the State of Illinois Department of Natural Resources, the Illinois State Historic Preservation Officer, and the Advisory Council on Historic Preservation, Regarding Implementation of the Illinois River Ecosystem Restoration* (Appendix EA-C). The execution of this PA by the signatories forms a partnership for the purposes of implementing the Illinois River Ecosystem Restoration (IRER) program, authorized by Section 216 of the 1970 Flood Control Act and Section 519 (Illinois River Basin Restoration) of Water Resources Development Act of 2000. Any further actions pursuant to the NHPA can proceed under the aforementioned PA.

C. Federal Water Project Recreation Act. This Act requires that recreation and fish and wildlife enhancement be given full consideration in Federal water development projects. The proposed project has given full consideration to recreation and fish and wildlife enhancement as required by this Act and is in compliance with the Act's objective.

D. Fish and Wildlife Coordination Act. Project plans have been coordinated with the USFWS, the U.S. Environmental Protection Agency, the U.S. Coast Guard, and the IDNR by letter dated, July 16, 2002. Coordination responses received can be found in Appendix EA-B.

E. Wild and Scenic Rivers Act of 1968, as amended. This portion of the Illinois River is not listed as wild or scenic.

F. Executive Order 11988 (Flood Plain Management). The implementation of the preferred alternative would, to the extent possible, avoid long- and short-term adverse impacts associated with the occupancy and modification of the base floodplain and avoids direct and indirect support of development or growth (construction of structures and/or

facilities, habitable of otherwise) in the base floodplain wherever there is a practicable alternative. Because the District has determined that there is no other practicable alternative to the preferred alternative, the project, as proposed, is judged to be in full compliance.

G. Executive Order 11990 (Protection of Wetlands). There would be no net loss of wetlands. Therefore, the preferred alternative for this project is judged to be in full compliance, since it promotes the development and improvement of a wetland ecosystem under the management of the IDNR.

H. Clean Water Act (Sections 401 and 404), as amended. A Clean Water Act Section 404(b)(1) Evaluation is included in this document and can be found in Appendix EA-A. Section 401 Water Quality Certification will be obtained from the State of Illinois prior to project implementation.

I. Clean Air Act, as amended. No aspect of the proposed project has been identified that would result in violations to air quality standards. Any potential impacts to air quality as a result of project activities would be temporary and cover only a limited area. Therefore, the project is judged to be in full compliance.

J. Farmland Protection Policy Act of 1981. No farmland would be adversely impacted by project construction. Therefore, the project is judged to be in full compliance.

K. National Environmental Policy Act of 1970, as amended. The completion and public coordination of this EA fulfills NEPA compliance. Therefore, the project is judged to be in full compliance.

L. National Ecosystem Restoration (NER) Plan. The NER Plan is the plan that best satisfies the Federal planning objectives of increasing the net quantity and/or quality of desired ecosystem resources within the planning area and the rest of the nation. These measures are based on changes in ecological resource quality as a function of improvement in quality habitat quality and expressed quantitatively in physical units or indices (but not monetary units). The proposed plan is considered the best to fulfill the NER objective.

XIV. PUBLIC INVOLVEMENT AND COORDINATION

Coordination for the project has been and will be maintained with the following State and Federal agencies:

U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
Illinois Environmental Protection Agency
Illinois Department of Natural Resources

U.S. Coast Guard

Illinois Historic Preservation Agency

All letters and comments received by the Rock Island District are contained in Appendix EA-B. Comments and letters received from the various agencies have been incorporated into this EA.

FINDING OF NO SIGNIFICANT IMPACT

PEKIN LAKE STATE FISH AND WILDLIFE AREA
SOUTHERN UNIT

CRITICAL RESTORATION PROJECT
ILLINOIS RIVER ECOSYSTEM RESTORATION STUDY, ILLINOIS

Having reviewed the information provided by this Environmental Assessment, pending data obtained from cooperating Federal, State, and local agencies and from the interested public, I find that the proposed dredging and placement within the Pekin Lake State Fish and Wildlife Area in the manner prescribed in this document for the restoration and improved management of the wildlife area would not significantly affect the quality of the human environment. Therefore, it is my determination that an Environmental Impact Statement (EIS) is not required. This determination will be reevaluated if warranted by later developments.

Factors that were considered in making a determination of no significant impacts and that an EIS was not considered are as follows:

a. Any negative impacts, which might occur, have been minimized and/or are temporary in nature. Project benefits are expected to be long-term in nature. Those benefits being deep backwater fisheries habitat and improved diversity of the riparian forest within the wildlife area.

b. The proposed action would have no adverse effect on the continued survival of any State or federally listed threatened or endangered species or critical habitat.

c. No significant adverse impacts are anticipated to environmental, social, economic, or historical properties as a result of dredging or dredged material placement activities proposed by this ecosystem restoration project.

d. Early and ongoing coordination with State and Federal agencies has been maintained during the planning process to address any potential concerns that may arise from this project.

The environmental review process indicates that the proposed action does not constitute a major Federal action significantly affecting the environment. Therefore, preparation of an EIS is not required. This determination may be reevaluated if warranted by later developments.

_____
(date)

Duane P. Gapinski
Colonel, U.S. Army
District Engineer